

# TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

WYOMING

SOIL CONSERVATION SERVICE

Biology No. 118

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Subject: VAGRANT SHREW\*

## General

Vagrant shrews (*Sorex vagrans*) in Colorado are found at elevations ranging from 5,300 ft (1590 m) to 11,400 ft (3420 m) and are most common in mesic situations.

## Food Requirements

Vagrant shrews feed primarily on insects, earthworms, and other small invertebrates, although some plant material is consumed.

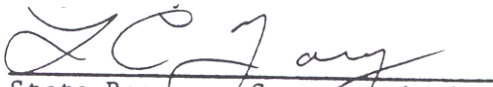
## Water Requirements

Moist habitats are preferred by vagrant shrews, although they are not restricted to these areas. The mean distance from the point of capture to the nearest water surface was 61.9 ft (18.6 m) in a study area in Colorado which consisted of a marsh, a clearcut, and a surrounding forest. Vagrant shrews in California preferred wet areas dominated by willow (*Salix* spp.) and sedge (*Scirpus* spp.). Vagrant shrews in Montana were trapped in grassy meadows up to 450 ft (135 m) from water and in fairly dry woods up to 600 ft (180 m) from water, although most were found in wet areas.

Vagrant shrews were common in Wyoming in moist aspen, lodgepole pine, spruce-fir, and alpine communities. The preference of vagrant shrews for moist habitats may be due to the plant growth forms associated with wetlands rather than the presence of water.



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\*Information taken from Ecoregion M3113 Handbook and Habitat Suitability Index Models, Wildlife Species Narratives (literature searches), U.S. Fish and Wildlife Service, various dates between 1978-1984.

#### Cover Requirements

Tall, dense ground vegetation and loose rocks are used as cover. A wet meadow in California was inhabited by vagrant shrews only where tall grasses and logs provided cover. An absence of vagrant shrews in short grass situations was reported in Wyoming and Washington. Vagrant shrews in Colorado were common in a clear-cut area bordering a marsh. The herbaceous plant growth of the clearcut and the marsh gave them a similar vegetative form. Although vagrant shrews are preyed upon by many predator species, the primary importance of cover may be that it maintains conditions of high humidity rather than serving as protection from predation.

#### Reproductive Requirements

Nests are constructed of grass and dry leaves and are located in stumps or logs.

#### Special Habitat Requirements

No special habitat requirements were found in the literature.

#### Interspersion Requirements

Ecotones are suboptimal habitat for vagrant shrews. Vagrant shrews in Colorado preferred both marsh and clear-cut habitat to the intermediate zone between them.

Little overlap is shown in the home ranges of neighboring vagrant shrews. Estimates of home range size varied from a mean of 243 sq m (304 sq yds) in Washington to 4,343 sq m (5,429 sq yds) in British Columbia. An increase in the home range size of breeding vagrant shrews was reported in British Columbia and Washington. The size of home ranges in British Columbia increased from a mean of 1,039 sq m (1,299 sq yds) to 3,258 sq m (4,073 sq yds) with the onset of the breeding season. Breeding males had home ranges almost twice the size of breeding females. One study found no sexual differences in home range size.

The vagrant shrew is territorial, except during the breeding season.

Population levels of the vagrant shrew in British Columbia were limited by the abundance of winter foods.